

6. Revised Transportation Conformity Budgets

Key Points:

- Provides revised MOBILE6 conformity budgets for 2007 and 2012 for NO_x and VOC for use in testing TIPs and Regional Transportation Plans
- Provides overview of the expected scope, duration and application of these budgets to the 5 ozone areas (10 counties) accounting for their status as continuing nonattainment (6 county Milwaukee area), attainment maintenance (Sheboygan and Kewaunee) and proposed attainment maintenance (Manitowoc and Door)
- Provide proposed SIP document regarding the MOBILE6 Budget Updates [Last Section]

Introduction to the Mobile Sector Budgets Revision

The Clean Air Act (CAA) requires a showing that regional transportation plans, and Transportation Improvement Programs, conform to the emissions budgets for the mobile sector for the milestone years of 2007 and 2012. These emissions budgets are required to be included in this proposed maintenance plan. The conformity assessment follows a coordinated, consultative process involving the Departments of Transportation and Natural Resources, the regional planning entities for areas with air quality problems, EPA and the Federal Highway Administration.

Conformity budgets must address both VOC and NO_x emissions for all ozone nonattainment areas designated under the CAA. These budgets need to reflect consistent planning assumptions between the Air Quality and Transportation planning processes and reflect the impact of emission forecasts and emission control programs incorporated into the attainment demonstration. The Mobile Sector Budgets for 2007 and 2012, incorporated in this plan are shown below.

The emission levels in the table below are similar to those used in the attainment demonstration modeling but also include revisions to the transportation conformity budgets contained in the maintenance plans for Kewaunee and Sheboygan counties. Extensive dialogue with stakeholders earlier in the process refined the mobile sector projections. The refinements reflect existing and proposed mobile sector emission control components and updated speed profiles and vehicle fleet mix for the attainment year of 2007 and the 10 year maintenance plan year of 2012. The revised budgets and projections in this maintenance plan will replace the budgets and projections that are in the Attainment Demonstration once these budgets receive a positive adequacy determination in accordance with EPA guidance of May 14, 1999 as part of the SIP review and approval process.

The proposed budget revisions no longer include formal 2012 budgets for the six-county Milwaukee area because that area is no longer eligible for redesignation to attainment. Projections of the mobile sector emissions for 2012 for the six-county area are included in the aggregate redesignation inventory projections supporting the maintenance plans proposed for the four northern areas but these do not reflect the formal conformity budgets that will be effective at that time.

Commitment to Revise the Motor Vehicle Emission Budgets based on MOBILE 6 and Background on the Budget refinement from the Attainment Demonstration levels

The State previously committed to revising the Phase 3 MVEB within one year after the release of the MOBILE 6 model by incorporating some newer emission reduction benefits and assumptions in the attainment demonstration modeling. The commitment occurred when EPA approved the earlier Phase 2 Attainment SIPs (which did not yet include modeled attainment demonstrations). The benefits primarily reflect the federal Tier 2/Low Sulfur Gasoline program.

US-EPA has committed to a rapid review for the adequacy of the re-proposed maintenance and attainment demonstration budgets based on MOBILE6. We expect that EPA will propose action on the budgets roughly concurrent with their determination of the approvability of the requested redesignation of Manitowoc and Door counties to attainment of the one-hour ozone standard.

The Department will conduct a new public hearing on three proposed SIP revisions (including the conformity budgets) in order to solicit public comment on the proposed motor vehicle emission budgets (MVEB) which will be in part incorporated as part of the Maintenance Plans for the four northern areas. The public hearing is scheduled for November 22, 2002 in Sheboygan, Wisconsin.

These updated MVEB will apply to the 4 single county ozone maintenance areas (Door, Kewaunee, Manitowoc and Sheboygan) and the six-county ozone Milwaukee ozone nonattainment area (Milwaukee, Racine, Kenosha, Waukesha, Washington, Ozaukee). Assumptions regarding budget development, a description of stakeholder involvement and the proposed update using the MOBILE6 model are included in the formal SIP support section below. More detailed documentation of the emissions modeling are in Appendices 4-1 and 4-3.

Section 93.104(e)(2) of the federal transportation conformity rule requires that the conformity of the transportation plan and transportation improvement program (TIP) be re-determined within 18 months following the positive adequacy determination by EPA of the updated MVEB included in the State's initial submission of the Maintenance Plan SIP. Extensive dialogue with stakeholders occurred during and after the initial spring/summer 2002 Maintenance Plan drafting process.

Following the June 2002 ozone episodes that led to retraction of the Milwaukee six-county area from the proposed redesignation effort, the Department and stakeholders agreed to pursue refined mobile sector projections and to redraft conformity budget updates for all the 5 areas (10 counties) using MOBILE6 directly rather than continue to pursue an intermediate redesignation maintenance plan based on MOBILE5 budgets.

As of October 15, 2002, the Department has met with transportation stakeholders, (WisDOT, SEWRPC, BLRPC and FHWA staff and management representatives) to describe the basis of the now proposed MOBILE6 budgets for the 5 areas. The Department reaffirmed its position that the MVEB established for in the Phase 3 Attainment Demonstration SIP could not be exceeded. Moreover, any excess emissions generated for the 4 Northern Counties based on MOBILE 6 could not be allocated to an additional buffer

for the Six County Severe Ozone Attainment Area. Transportation stakeholders agreed that any further formal comments regarding the conformity budgets would be presented during the 30 day public comment period. The schedule calls for the budgets to get re-noticed for public hearing later in October, with the hearing late in November or early December 2002. The draft SIP revision for the conformity budgets follows.

Proposed SIP Revision Document – MOBILE6 Conformity Budgets

MOBILE6 Motor Vehicle Emission Budgets
A Proposed State Implementation Plan Revision for the Wisconsin Ozone SIP
-
Including the Six-county Milwaukee Area, Sheboygan Co Area, Manitowoc Co
Area, Kewaunee Co Area, and the Door Co Area

Wisconsin Department of Natural Resources
Bureau of Air Management

October 18, 2002

INTRODUCTION

This chapter presents the proposed motor vehicle Volatile Organic Compound (VOC) and Nitrogen Oxides (NOx) emission budgets for the following counties: Door, Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Sheboygan, Racine, Washington and Waukesha. These budgets address the attainment plan crafted to meet the one hour ambient air quality standard for ground level ozone in Wisconsin. The budgets set emission ceilings for testing the conformity of future transportation improvement plans and more general regional transportation plans with the standing air quality plan.

WDNR used the U.S. EPA's MOBILE6 model to estimate the updated emission budgets which had been previously based on US-EPA's MOBILE5 model. The motor vehicle emission budgets (MVEBs) are part of the redesignation maintenance plans for Door and Manitowoc counties and the budget updates also support maintenance plan updates for Kewaunee and Sheboygan counties and provide the required update to the standing MVEBs for the six county Milwaukee severe ozone non attainment area including Kenosha, Milwaukee, Ozaukee, Racine, Washington and Waukesha counties. Budgets for the redesignation and maintenance counties address 2007 and 2012. Budgets for the six county nonattainment area address 2007.

BACKGROUND

On July 2, 2001, the United States Environmental Protection Agency, (EPA), approved the one-hour ozone attainment demonstration SIP that was submitted by the Department on December 22, 2000. The approved SIP included, among other things, air quality modeling, rules to reduce emissions of ozone forming pollutants (i.e., nitrogen oxides (NOx) and volatile organic compounds (VOC)), and a plan demonstrating how progress in emission reductions will be achieved through the area's attainment date of 2007 (i.e., Rate of Progress Plan (ROP)). EPA approved commitments by the state to complete a mid-course review of the attainment status of the one-hour ozone nonattainment area and to recalculate conformity budgets within one year of the release of MOBILE6.

In November of 1999, EPA issued two memoranda¹ to articulate its policy regarding States that incorporated MOBILE5-based interim Tier 2 standard benefits into their SIPs and MVEBs. Although these memoranda primarily targeted certain serious and severe ozone nonattainment areas, EPA has implemented this policy in all other areas that have made use of federal Tier 2 benefits in air quality plans from EPA's April 2000 MOBILE5 guidance, "MOBILE5 Information Sheet #8: Tier 2 Benefits Using MOBILE5."

All States whose attainment demonstrations or maintenance plans include interim estimates of the Tier 2 standards have committed to revise and resubmit their budgets within either 1 or 2 years of the final release of MOBILE6 in order to gain SIP approval. States that committed to revise their budgets within 2 years after MOBILE6 is released also made the commitment that conformity will not be determined during the second year unless there are adequate SIP budgets in place that were developed using MOBILE6. Wisconsin transportation stakeholders have commented that a conformity determination would in fact take place in the second year of the grace period, thus confirming the direction of establishing updated MVEBs within one year after the Federal Register Notice of the availability of the MOBILE6 emissions model.

On January 29, 2002 EPA approved and announced the availability of the MOBILE6 motor vehicle emissions factor model. Because the Ozone Attainment Demonstration for the Eastern Wisconsin Area incorporated the emission reduction benefits of the national Tier 2 motor vehicle engine and fuels standards and a conformity determination will be conducted within the second year of the grace period, all associated motor vehicle emission budgets must be revised using the MOBILE6 model within one year, (January 29, 2003). This SIP revision addresses that required update.

MOTOR VEHICLE EMISSIONS BUDGET

As described in CAA section 176(c)(2)(A), attainment demonstrations necessarily include estimates of motor vehicle emissions to help areas reach attainment. These estimates act as a budget or ceiling for emissions from motor vehicles, and are used in conformity to determine whether transportation plans and projects conform to the attainment SIP. In order for transportation plans and projects to conform, estimated emissions from transportation plans and projects must not exceed the emission budgets contained in the attainment demonstration. The criteria that determines whether a SIP's motor vehicle emission budgets are adequate for transportation conformity purposes are outlined in 40 CFR 93.118(e)(4).

MVEB must reflect appropriate and up-to-date projections of motor vehicle emissions for the attainment year. For example, assumptions about VMT, socio-economic variables and other planning assumptions must be appropriate and up-to-date. Also, the inputs to the MOBILE6 model and vehicle fleet characteristics must be appropriate and up-to-date as required by EPA's guidance on SIP inventories and the MOBILE users' guide. The nonattainment area vehicle fleet characteristics and VMT inventory that are used to establish the budgets must include the effects of all motor vehicle controls that will be in place by the attainment year, including federal measures, (e.g., National Low Emission

¹ November 3, 1999 EPA memorandum entitled, "Guidance on Motor Vehicle Emissions Budgets in One-Hour Ozone Attainment Demonstrations," and November 8, 1999 EPA memorandum entitled, "1-Hour Ozone Attainment Demonstrations and Tier 2/Sulfur Rulemaking."

Vehicle – NLEV program) and the mobile source control measures assumed in the Ozone Attainment Demonstration SIP.

The Department plans to hold a public hearing in November to solicit public comments on the updated MOBILE6 MVEBs as well as other proposed SIP revision components including the 1999 Milestone Inventory and the amended Redesignation Request and proposed maintenance plans for Manitowoc County and Door County areas. The budget for the severe ozone nonattainment area was based on the Southeastern Wisconsin Regional Planning Commission (SEWRPC) forecast that Vehicle Miles Traveled (VMT) will increase in their six county region (excluding Walworth county) from 37,095,100 miles per average annual weekday in 1995 to 45,881,900 miles per average annual weekday in 2007. The projected 2007 traffic volumes are based upon an application of SEWRPC's travel simulation model to a high growth future in the region with respect to changes in population, households and employment, but assuming the implementation of regional land use and transportation system plans, with projected growth rates of 2% between 1995 and 2000, and 1.7% between 2001 and 2007.

For the four Northeastern Wisconsin Counties (Door, Kewaunee, Manitowoc and Sheboygan), the 2007 Vehicle Miles Traveled (VMT) projections were obtained from the WiDOT and were updated from the forecasts used for the Ozone Attainment Demonstration SIP. In addition, data pertaining to the four Northeastern Wisconsin Counties were updated by WiDOT Traffic Forecasting to include new vehicle mix projections and speed estimates.

Conformity budgets must address both VOC and NO_x emissions for all ozone nonattainment areas designated under the CAA. These budgets need to reflect reasonably consistent planning assumptions between the Air Quality and Transportation planning processes and reflect the impact of emission forecasts and emission control programs incorporated into the attainment demonstration. The MVEBs for 2007 and 2012 in this plan are shown below:

MOBILE6 Based Mobile Sector Budgets for the Attainment Demonstration, Updated Maintenance Plans and new Maintenance Plans associated with Redesignation of Manitowoc and Door Counties

Wisconsin Counties with Ozone Attainment Conformity Budgets	2007		2012***	
	VOC* (TPD)	NO _x ** (TPD)	VOC (TPD)	NO _x (TPD)
Milwaukee, Racine, Kenosha, Waukesha, Washington, & Ozaukee	32.2	71.4	N/A****	N/A****
Kewaunee	0.61	0.97	0.41	0.63
Door	1.20	2.03	0.79	1.30
Sheboygan	3.24	6.40	1.99	3.97
Manitowoc	3.12	6.33	2.03	3.99
TOTAL	40.37	87.13		

* Budgets for 2007 include 6.1% “safety margin” (from “high growth” VMT) for the Six-County Area and a 15.0% “safety margin” for other four areas.

** Budgets for 2007 include 3.0% “safety margin” (from “high growth” VMT) for the Six-County Area, a 13.8% “safety margin” for Sheboygan County, and a 15.0% “safety margin” for other three areas.

*** Budgets for 2012 include 15.0% “safety margin” for the four areas for which a 2012 budget is required.

****A 2012 budget is not required for the Six-County Area.

Dialogue with stakeholders has occurred relating to the previous process to redesignate the entire region and later when the Department elected to consolidate efforts to redesignate a smaller area and refine MOBILE6 emission budgets. The refinements reflect existing and proposed mobile sector emission control components and updated VMT projections from the Ozone Attainment Demonstration SIP to use for the attainment years of 2007 for the six-county severe ozone non attainment area and years of 2007 and 2012 for the revised maintenance plans and redesignated areas. The revised budgets and projections in the plan will replace the Ozone Attainment Demonstration budgets and projections after the MOBILE6 motor vehicle emission budgets have received a positive adequacy determination in accordance with guidance (May 14, 1999 memo titled “Conformity Guidance on Implementation of March 2, 1999 Conformity Court Decision”).

The Department met during 2002 with transportation stakeholders, (WIDOT, SEWRPC, BLRPC, FHWA staff and management representatives and interested transportation construction industry and environmental advocacy groups). During those sessions, the Department explained that the proposed motor vehicle emissions budgets for counties included in the Phase III Ozone Attainment Demonstration SIP, would be calculated upon high economic growth and an additional margin available from the modeled attainment budgets (not to exceed 7.5%) in order to minimize the potential for transportation conformity failure.

In response to stakeholder concerns that changes in planning assumptions could lead to budgets being exceeded in the four northeastern counties, the Department increased the margin for the four northeastern counties to the smaller of 15% or the amount available from the modeled attainment budgets. This buffer should be sufficient to accommodate any instability of the HPMS traffic monitoring system in those individual counties.